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Application of the penalty method to nonstationary approximation of an optimization problem

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Abstract

We solve a general optimization problem, where only approximation sequences are known instead of exact values of the goal function and feasible set. Under these conditions we suggest to utilize a penalty function method. We show that its convergence is attained for rather arbitrary means of approximation via suitable coercivity type conditions. © 2014 Allerton Press, Inc.

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Keywords

approximation sequence, coercivity conditions, non-stationarity, optimization problem, penalty method